Les variables publiques sur les classes sont conseillées par soucis de simplification lorsqu’elles sont des variables de configuration dont les modifications ne déclenchent pas d’action.

Risques :

-Dépassement de stack : ??

Quand un composant a besoin d’un composant du layer d’en dessous, il utilise le « Layer.h » associé. Les composants d’un level ne doivent pas inclure le « Layer.h » de leur level.

Setup gather all global vars so that thread safety problems are easier to catch (as they are always related to a global var)

Always pass via ArdOs to create OS objects so that statistic are possible

Dynamic memory allocation (new/malloc/free/delete) are forbidden at runtime to prevent :

* thread safety in memory allocation (usually not thread safe in light os)
* memory fragmentation

New are allowed at setup but discouraged (prefer a static assembly). Delete and free are not required as the CPU is always reset after use.

# Tooling

## Atmel

In order to add modules when a project is created with ASF, you need to go to “ASF->ASF Wizard”.

In case it’s needed, the CPU reference is ATSAM3X8E.

Here is a simple main file to blink the amber led “L” (orange) :

#include <asf.h>

int main (void)

{

sysclk\_init();

board\_init();

gpio\_configure\_pin(LED0\_GPIO, LED0\_FLAGS);

gpio\_set\_pin\_low(LED0\_GPIO);

while(1)

{

gpio\_toggle\_pin(LED0\_GPIO);

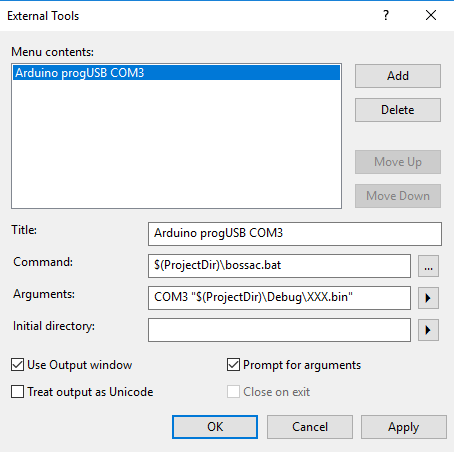
delay\_ms(500);

}

}

## Atmel Prog without JTAG

In order to program the Arduino due from Atmel witout JTAG , we use “bossac”. In “Tools->External tools…” :



Add the following “bossac.bat” file in your project :

@mode com3:1200,n,8,1

@sleep 1

@C:\Users\wix\AppData\Local\Arduino15\packages\arduino\tools\bossac\1.6.1-arduino/bossac.exe -i -U false --port=%1 -e -w -b %2 -R

Note : normally we should be able to call bossac directly from the dev env, but for a strange reason, the serial reconfiguration is used to provoke an hard-reset on the board which is necessary.

Note2: If you can configure Atmel for this, you can also configure an Eclipse. The difference is that Atmel provide facilities to compile as the dev env is integrated.

JTAG Wiring :

